Torque measuring device for a device measuring the flow of material

Patent number: DE19905951
Publication date: 2000-08-17
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Classification:
- international: G01F1/84
- european: G01F1/80
Application number: DE19991005951 19990212
Priority number(s): DE19991005951 19990212

Also published as:
WO0047955 (A1)
EP1151252 (A1)
US6705171 (B1)
EP1151252 (B1)

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Abstract of **DE19905951**

The invention relates to a device for measuring the flow of material, especially of a flow of bulk material, according to the Coriolis principle of measurement. Said device contains an impeller (2) which is driven by a motor (9) with a constant torque. The flow of material is fed to the impeller (2) and is radially deviated. The driving torque is measured by a torque measuring device. The driving torque is transmitted to a force-sensing element (22) via a pivot bearing element (12) in order to determine the torque. The force-sensing element (22) contains at least two horizontal leaf spring elements (16, 17) which cross each other and which are arranged in such a way that the crossing point of said leaf spring elements (16, 17) coincides a rotational axis (13). A thrust bearing element (14) is integrated into said pivot bearing element (12). The weight of the drive train is transmitted to a stationary housing component (8) by means of the thrust bearing element (14) and a ball bearing or toe bearing. A frictionless air bearing (3) is provided for horizontally housing the primary shaft (5) in order to improve the measuring accuracy.